

REMARKS

Claims 1-78 are pending in the application, of which Claims 1, 11, 19, 29, 37, 47, 55, 63, and 71 are independent claims. All claims stand rejected under 35 U.S.C. § 103. The rejections are traversed. Claim s79 and 80 have been added.

Regarding Rejections

Claims 1-78 have been rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 6,338,067 to Baker et al. in view of U.S. Patent No. 6,256,628 to Dobson et al. As previously argued, the Office Action fails to establish a prima facie showing of obviousness. Even if combined, the cited references would not yield the claimed invention.

As disclosed and claimed by the Applicants, a series of raw data values (e.g. daily closing stock prices) are stored in a database. For the series of raw data values, a plurality of intervals of adjustment data (e.g. split adjustments) are also stored in the database. By retrieving an adjusted data value from the database, such as to compute a moving average, the intervals of adjustment data are applied to the raw data values. Those calculations are performed in response to the retrieval process by, for example, defining a database view to associate the raw data values with the adjustment data.

As described in the Applicants' specification, interval adjustment data is used to adjust the raw data over an interval of the series (e.g. stock price over a period of time) to yield adjusted data values for a selected point in the series. These adjustments are needed to accurately use data over different periods in the series, such as earlier data with later data, because of, for example, the value of money or the impact of a stock split over time.

By maintaining current adjustment values in the database, the Applicants can transparently retrieve adjusted data values. The cited references do not teach or suggest such a system.

The primary reference, Baker, discusses a product hierarchy database. As previously discussed, FIG. 7 of Baker is the only example of using pricing data. As shown in FIG. 7, the stored time series data values are merely tabulated for display. Baker does not teach or suggest applying adjustment values (split values) to raw data values (closing prices) during retrieval from the database. Nor does Baker teach or suggest the claimed "adjustment data."

The main point of the Office's reasoning appears to be that because certain tools used by the Applicants to make the claimed invention, namely database views, were known in the art, those tools could have been used to bring Baker closer to the claimed invention. That is a classic application of hindsight obtained by reading the Applicants' specification. The test is not what could have been done with prior art knowledge, it is what was actually taught or what one of ordinary skill in the art would be motivated to do with those teachings. In the prior art, custom programming was used to apply intervals of adjustment data to raw data values over a range of the series. Baker does not teach or suggest otherwise.

The fact that Baker may suggest various modules and data fields does not mean that Baker suggests the claimed "adjustment data" and the application of the "adjustment data" to raw data values. Again, although Baker stores split data, it is never applied by Baker to adjust the stock prices. Indeed, the Office Action agrees that Baker fails to teach the claimed "plurality of intervals of adjustment data" and "each interval of adjustment data including an adjustment value to be applied to raw data values over a range specified in the series."

For those limitations, the Office Action cites Dobson. The reliance on Dobson is faulty because Dobson is merely related to rendering data values on a display.

In Dobson, the stored values of the data being displayed are never adjusted. As can be easily seen by examining FIGs. 1 and 2 of Dobson, the data values remain the same. Dobson, indeed, does not adjust the raw data values; only the data value representations. In other words, a data point having a value of 80% in FIG. 1 also has a value of 80% in FIG. 2. Likewise, a stock price of \$80 would be displayed as \$80 according to FIG. 1 and FIG. 2.

To establish a prima facie obviousness rejection under 35 U.S.C. § 103, the office has the burden of showing that all claim limitations can be found in the prior art, as properly combined. That burden still has not been met in this case.

First, the office action fails to address all claim limitations. As recited in all claims, the raw data values are organized as a series in a first database structure, and the plurality of intervals of adjustment data are stored in a second database structure. The Office has interpreted "database structure" to be record fields. That is inconsistent with the teachings of the Applicant's specification and Baker. In fact, Baker stores pricing and split data values in the same database structure - the quantitative information records. Furthermore, Baker does not teach or suggest organizing raw data values as a series in a first database structure. While Dobson is purported to teach a plurality of intervals of adjustment data, Dobson scales chart data for display and the scaling adjustments to the rendered chart are done interactively (Dobson, col. 3, ll. 14-27). There is no suggestion or need for scale intervals and the like to be stored in a database.

Second, the Applicants' claims recite that adjustment values be applied "in response to retrieval of an adjusted data value from the database." Baker provides split data but does not apply it to raw data values to yield an adjusted data value. Furthermore, Baker provides no method of retrieving an adjusted data value. Nor does Dobson. This is a typical prior art approach, where Baker's data would be reported to and processed by another application.

If combined, Baker and Dobson would yield a prior art charting system. The stored data from Baker would be charted by Dobson. A user could then scale the rendered charts various ways to better view the data. Additional steps would then be required to apply the split data to raw stock price data. Such prior art techniques differ from the claimed invention.

Again, as claimed, the Applicants apply adjustments to the raw data values during retrieval from the database. That adjusted data could then be charted, for example, by Dobson's method.

While the Office has not fully met its burden, the last Office Action attempts to respond to some remarks.

The Examiner did not cite to any place in Baker or Dobson to show that either reference applies split values to security prices, or otherwise applies adjustment values to a time series of raw data values as claimed by the Applicants. Instead, the Examiner suggests that it could have been done using views, etc. The Applicants believe that approach would have required the use of improper hindsight.

Similarly, the Examiner did not cite to any place in Baker or Dobson to show that adjusted data values are retrieved from the database as claimed by the Applicants.

The Examiner also suggests that the claimed invention is limited to charting of data. That is not the case. While the Applicants have shown pricing data graphically, the claims are not related to charting. The claims relate to retrieving adjusted time series data (e.g., stock price adjusted for historical splits) from a database. Dobson simply plots any data values and does not care if the data values are adjusted or not adjusted.

Finally, the Applicants have pointed out and discussed numerous differences between the claims and both Baker and Dobson, both alone and in combination.

The cited references fail to suggest the claimed method of applying interval-based adjustments to data in a database, including “for a series of raw data values, storing a plurality of intervals of adjustment data in a second database structure” and “associating the first and second database structures so that the adjustment value is applied in response to retrieval of an adjusted data value from the database” as claimed. In particular, the cited references fail to suggest “a view of the database” to associate the structures and “using the view to apply the adjustment value to the raw data values during retrieval” as claimed. The dependent claims include further distinguishing limitations. The Office Action fails to establish a prima facie showing of obviousness under 35 U.S.C. § 103(a).

Further, independent claims 1, 11, 19, 29, 37, 47, 55, 63 and 71 have been amended to further recite that the retrieval of an adjusted data value from the database is to provide the adjusted data values corresponding to the raw data values and the

adjustment value. The prior art of record does not disclose or suggest the provision of the adjusted data values corresponding to the raw data values having applied thereto the adjustment value in response to retrieval of an adjusted value from the database. Reconsideration of the rejections of Claims 1-78 is respectfully requested.

Claims 79 and 80 have been added. Claims 79 and 80 recite that the adjustment value is associated with a historical event (e.g. a stock split). The prior art of record does not disclose or suggest that the adjustment value is associated with a historical event, therefore claims 79 and 80 are also believed allowable.

CONCLUSION

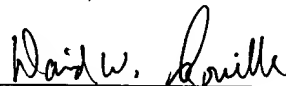
In view of the above amendments and remarks, it is believed that claims 1-80 are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney.

Applicant hereby petitions for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3735.

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If the enclosed papers or fees are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (508) 616-9660, in Westborough, Massachusetts.

Respectfully submitted,



David W. Rouille, Esq.
Attorney for Applicant
Registration No.: 40,150
Chapin Intellectual Property Law, LLC
Westborough Office Park
1700 West Park Drive
Westborough, Massachusetts 01581
Telephone: (508) 616-9660
Facsimile: (508) 616-9661

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